

DNR Confirms Virus in Lake St. Clair Fish

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The Department of Natural Resources has confirmed that viral hemorrhagic septicemia (VHS), a virus that causes disease in fish but does not pose any threat to public health, is present in several fish species in Lake St. Clair. The virus has also been detected in fish in the past year in Lake Ontario by the Ontario Ministry of Natural Resources and New York Department of Environmental Conservation, in Lake Erie by the Ohio Department of Wildlife, and in the St. Lawrence River by the New York Department of Environmental Conservation.

The virus was detected by the DNR/MSU Aquatic Animal Health Unit in muskellunge, yellow perch, gizzard shad, northern pike, silver redhorse, and shorthead redhorse collected this past spring in Lake St. Clair. DNR fisheries officials now believe VHS was a likely factor in the deaths of muskellunge, yellow perch, and gizzard shad observed during the spring of 2006 in the St. Clair River, Lake St. Clair, and the Detroit River. The timing of the die-offs corresponded with the end of the stressful winter season for all fish species and the beginning of spawning season for muskellunge. Spawning is extremely taxing and creates additional stress on fish, thus making them more vulnerable to infection and disease. VHS outbreaks tend to occur during the spring season since the virus thrives at water temperatures between 40 and 60 degrees.

VHS has also affected fish elsewhere in the lower Great Lakes. This past spring, 18 dead and dying muskellunge were collected in the Thousand Islands region of the St. Lawrence River during the spawning period. In addition, VHS is suspected as a factor in large-scale mortalities of freshwater drum and yellow perch observed in Lake Erie, and large numbers of round gobies that perished in Lake Ontario this past spring.

There are at least four different strains of VHS. The virus has been found in continental Europe, Japan, and both coasts of North America. The European strain of this virus has been responsible for large-scale losses in rainbow

trout and turbot in fish farms. Prior to 2005, VHS-related mortalities were limited in North America to saltwater fish species such as Pacific herring and pilchard from the Pacific Coast of North America and mummichogs in Atlantic Ocean tributary streams. Systemic VHS infections have been found in a range of North American fish including rainbow trout, brown trout, lake trout, Chinook salmon, and coho salmon, but large-scale mortalities have not been documented to date. In 2005, VHS was detected for the first time in Great Lakes fish species in the US and Canada, including muskellunge in Michigan's waters of Lake St. Clair and freshwater drum in Lake Ontario. It is not known how VHS was transferred to the Great Lakes region or how long it has been in the waterways of the Great Lakes, although a re-analyzed sample from a muskellunge collected in Lake St. Clair in 2003 has recently tested positive for the virus.

It is not known what the long-term effects of this virus will be in Michigan, DNR fisheries officials said.

"One likely possibility is that VHS will act like many other viruses in the environment. Typically, viruses or bacteria infect fish, which may lead to disease in the fish if they are susceptible. Once the disease is expressed in these fish, a small percentage will die," said Kelley Smith, chief of the DNR Fisheries Division. "The vast majority, however, will survive and will develop immunity to the viruses or bacteria that cause a disease. Since there are no large-scale treatments for VHS that can be applied to fish in the wild, the presence of this new virus may result in spring fish mortalities that are abnormally high for a few years as more fish encounter the virus. These mortalities should abate as fish begin to build immunity to the virus."

Citizens are encouraged to report sick fish or fish kills to their local DNR office or use the DNR webpage at www.michigan.gov/dnr. Anglers should contact the DNR if they observe fish that exhibit any of the following signs: hemorrhaging in the skin, including large red patches particularly on the sides and anterior portion of the head; multiple hemorrhages on the liver, spleen, or intestines; or hemorrhages on the swim bladder that give the otherwise transparent organ a mottled appearance. This information will help DNR fisheries staff to track VHS and take appropriate management actions to help slow the spread of this virus.

Anglers and boaters can also help prevent the spread of VHS and other viruses or bacteria that cause disease in fish by not transferring fish between water bodies, and by thoroughly cleaning boats, trailers, nets, and other equipment when traveling between different lakes and streams. The use of a light disinfectant such as a solution of one part chlorine bleach to 10 parts water (i.e., 1 gallon of bleach to 10 gallons of

water) to clean vessels and live wells is very effective against VHS and other viruses and bacteria that cause disease in fish. Soaking exposed items such as live wells, nets, anchors, and bait buckets in a light disinfectant for 30 minutes is also an effective method to prevent the spread of a wide range of aquatic nuisance species.

The DNR is committed to the conservation, protection, management, use and enjoyment of the state's natural resources for current and future generations.